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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/055,235

10/25/2001

D. Scott Watkins

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7590

04/02/2004

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EXAMINER

NGUYEN, HUNG T

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/055,235

Applicant(s)

WATKINS, D. SCOTT

Examiner

Hung T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/25/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 & 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galan (U.S. 5,274,355) in view of Merz (U.S. 4,157,530).

Regarding claim 1, Galan discloses a tire failure detector (20) [ figs.6-7, col.7, line 24 to col.8, line 10 ] comprising:

- a receiver in a form of detector assembly (20) mounted in a housing adapted for being attached to portion of a motor vehicle for generating a signal as detecting thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ];
- a processor in a form of switching logic is connected to the receiver / detector (20) to compare the predetermined temperatures of each tire are programmed and detects any tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ];
- a display (80) operated by the processor for displaying an image of the detected abnormal signal [ fig.6, col.7, line 48 to col.8, line 10 ];
- an observer as a driver detecting the display of an abnormal signal [ fig.6, col.7, line 48 to

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col.8, line 10 ].

Galan does not specifically mention a cover for covering the receiver's housing to protect from debris on the roads.

Merz teaches a pressure sensor and signal generator in a vehicle are housed by hermetically sealed (18) for protecting physical damage from adverse environment as debris and road hazards may cause [ fig.2-5, col.7, lines 4-15 ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Merz in the system of Galan for protecting the receiver device from physical damage by adverse environment as debris and road hazards may cause.

Regarding claim 2, As long as the housing may cover the receiver from physical damage by adverse environment as debris and road hazards may cause that is primary subject. The housing can be any shape as desired by the skilled artisan.

Regarding claim 3, Galan disclose the housing (52) of the receiver / detector (20) is mounted in a portion of a wheel well of the motor vehicle [ fig.8, lines 33-50 ].

Regarding claim 6, Galan discloses the display (80) operated by the processor for displaying an image of the detected abnormal signal to the driver [ fig.6, col.7, line 48 to col.8, line 10 ].

Regarding claim 7, Galan discloses an infrared imaging device is used in the tire detector (20) [ col.4, lines 47-58 ].

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Regarding claim 8, Galan discloses a tire failure detector (20) having:

- a receiver in the form of detector assembly (20) mounted in a housing adapted for being attached to portion of a motor vehicle for generating a signal as detecting thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ] and
- a processor in the form of switching logic is connected to the receiver / detector (20) to compare the predetermined temperatures of each tire are programmed and detects any tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

Regarding claim 9, Galan does mention the tire failure detector may comprise at least four receivers (20) in the form of detector assembly (20) mounted in a housing adapted for being attached to portion of a motor vehicle for generating a signal as detecting thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ] and

- a processor in the form of switching logic is connected to the receiver / detector (20) to compare the predetermined temperatures of each tire are programmed and detects any tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

Regarding claims 10-11, Galan discloses the receiver detector (20) is mounted in a safety & appropriate manner way for detecting the thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

Regarding claim 12, Galan does disclose the tire failure detector may comprises:

- a tire mounted to a wheel of the motor vehicle for being observed by the receiver / detector

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assembly (20) [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ];

- at least four receivers (20) in the form of detector assembly (20) mounted in a housing adapted for being attached to portion of a motor vehicle for generating a signal as detecting thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ] and
- a processor in the form of switching logic is connected to the receiver / detector (20) to compare the predetermined temperatures of each tire are programmed and detects any tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

Regarding claims 13-14, Galan discloses the receiver detector (20) is mounted in a safety & appropriate manner way for detecting the thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

3. Claims 4-5 & 15-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galan (U.S. 5,274,355) in view of Merz (U.S. 4,157,530) further in view of Wilson (U.S. 5,377,381).

Regarding claim 4, The combination of Galan & Merz are still missing in the following:

- a supply of a pressurized fluid;
- a nozzle mounted relative to the housing for spraying a stream of the pressurized fluid;
- a tube connecting the supply of the pressurized fluid to the nozzle and
- the nozzle communicates the pressurized fluid for cleaning debris from the housing.

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Wison teaches a cleaning system includes a vehicle with a drive subsystem comprising a fluid powered drive motor through nozzles for spraying water to the buildup of dirt and debris on the objects as reducing the physical damage or defecting to the devices or machine were coated of dirt particles or foreigner matter on the object's housing [ col.1, lines 10-25 and abstract ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Merz & Wilson includes a cleaning tools are disclosed above in the system of Galan for protecting & cleaning up the receiver device from physical damage by adverse environment as debris and road hazards may cause.

Regarding claim 5, Wison discloses the cleaning system includes a vehicle with a drive subsystem comprising a fluid powered drive motor through nozzles for spraying water to the buildup of dirt and debris on the objects as reducing the physical damage or defecting to the devices or machine were coated of dirt particles or foreigner matter on the object's housing [ col.1, lines 10-25 and abstract ].

Regarding claim 15, Galan discloses a tire failure detector (20) [ fig.6-7, col.7, line 24 to col.8, line 10 ] comprising:

- a receiver in a form of detector assembly (20) mounted in a housing adapted for being attached to portion of a motor vehicle for generating a signal as detecting thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ];
- a processor in a form of switching logic is connected to the receiver / detector (20) to compare the predetermined temperatures of each tire are programmed and detects any tire in abnormal

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condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ];

- a display (80) operated by the processor for displaying an image of the detected abnormal signal [ fig.6, col.7, line 48 to col.8, line 10 ];
- an observer as a driver detecting the display of an abnormal signal [ fig.6, col.7, line 48 to col.8, line 10 ].

Galan does not specifically mention a housing having an elongated barrel, a transparent cover for covering the receiver's housing to protect from debris on the roads.

As skilled in the art may recognize that housing covers the receiver unit from physical damage by adverse environment as debris and road hazards may cause that is the primary subject not the shape. The housing can be any shape as desired by the skilled artisan.

Merz teaches a pressure sensor and signal generator in a vehicle are housed by hermetically sealed (18) for protecting physical damage from adverse environment as debris and road hazards may cause [ fig.2-5, col.7, lines 4-15 ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Merz in the system of Galan for protecting the receiver device from physical damage by adverse environment as debris and road hazards may cause.

The combination of Galan & Merz are still missing in the following:

- a supply of a pressurized fluid;
- a nozzle mounted relative to the housing for spraying a stream of the pressurized fluid;
- a tube connecting the supply of the pressurized fluid to the nozzle and
- the nozzle communicates the pressurized fluid for cleaning debris from the housing.

Wison teaches a cleaning system includes a vehicle with a drive subsystem comprising a



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fluid powered drive motor through nozzles for spraying water to the buildup of dirt and debris on the objects as reducing the physical damage or defecting to the devices or machine were coated of dirt particles or foreigner matter on the object's housing [ col.1, lines 10-25 and abstract ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Merz & Wilson includes a cleaning tools are disclosed above in the system of Galan for protecting & cleaning up the receiver device from physical damage by adverse environment as debris and road hazards may cause.

Regarding claim 16, Wison discloses the cleaning system includes a vehicle with a drive subsystem comprising a fluid powered drive motor through nozzles for spraying water to the buildup of dirt and debris on the objects as reducing the physical damage or defecting to the devices or machine were coated of dirt particles or foreigner matter on the object's housing [ col.1, lines 10-25 and abstract ].

Regarding claim 17, Galan discloses the display (80) operated by the processor for displaying an image of the detected abnormal signal to the driver [ fig.6, col.7, line 48 to col.8, line 10 ].

Regarding claim 18, Galan discloses an infrared imaging device is used in the tire detector (20) [ col.4, lines 47-58 ].

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Regarding claim 19, Galan discloses a tire failure detector (20) having:

- a receiver in the form of detector assembly (20) mounted in a housing adapted for being attached to portion of a motor vehicle for generating a signal as detecting thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ] and
- a processor in the form of switching logic is connected to the receiver / detector (20) to compare the predetermined temperatures of each tire are programmed and detects any tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

Regarding claim 20, Galan does mention the tire failure detector may comprise at least four receivers (20) in the form of detector assembly (20) mounted in a housing adapted for being attached to portion of a motor vehicle for generating a signal as detecting thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ] and

- a processor in the form of switching logic is connected to the receiver / detector (20) to compare the predetermined temperatures of each tire are programmed and detects any tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

Regarding claims 21-22, Galan discloses the receiver detector (20) is mounted in a safety & appropriate manner way for detecting the thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

Regarding claim 23, Galan does disclose the tire failure detector may comprises:

- a tire mounted to a wheel of the motor vehicle for being observed by the receiver / detector

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assembly (20) [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ];

- at least four receivers (20) in the form of detector assembly (20) mounted in a housing adapted for being attached to portion of a motor vehicle for generating a signal as detecting thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ] and
- a processor in the form of switching logic is connected to the receiver / detector (20) to compare the predetermined temperatures of each tire are programmed and detects any tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

Regarding claims 24-25, Galan discloses the receiver detector (20) is mounted in a safety & appropriate manner way for detecting the thermal characteristic of a tire in abnormal condition [ fig.6, col.2, lines 49-59 and col.7, line 24-68 ].

### **Conclusion**

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

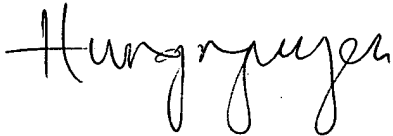
- Williams (U.S. 5,109,213) Tire pressure monitor.
- Coulthard (U.S. 5,825,286) Vehicular data collection and transmission system and method.
- Cook et al. (U.S. 5,886,350) Multi-axis wheel transducer with angular position detector.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Nguyen whose telephone number is (703) 308-6796. The examiner can normally be reached on Monday to Friday from 8:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass, Jeffery can be reached on (703) 305-4717. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

A handwritten signature in cursive script, appearing to read "Hung T. Nguyen".

Examiner: Hung T. Nguyen

Date: Mar. 31, 2003